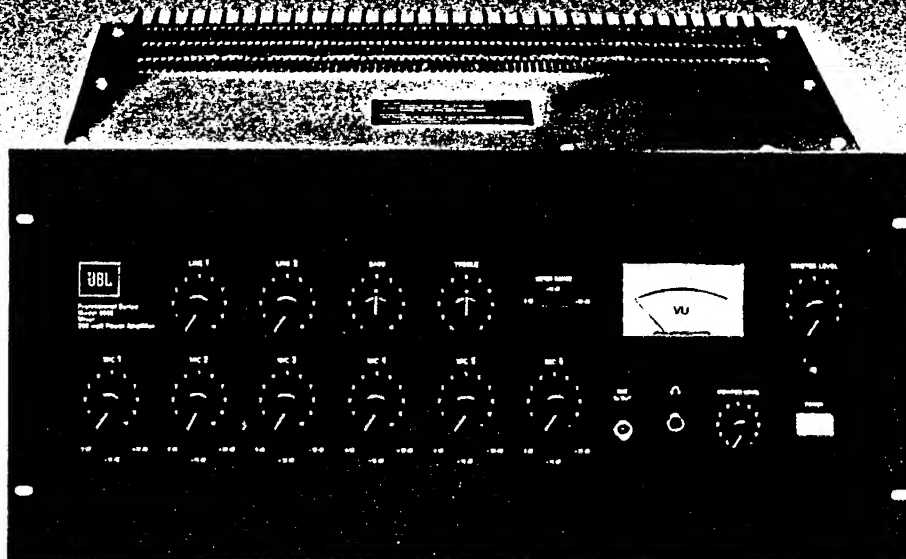


Professional Series

Model 6502

Mixer/Amplifier

200 WATT RMS
100 WATT PEAK
100 WATT PEAK
100 WATT PEAK
100 WATT PEAK
100 WATT PEAK



The JBL 6502 combines an eight-input (six microphone and two line level) mixer with a high power, single-channel amplifier. Simpler to install than a rack-assembled system, the JBL 6502 is ideal for sound systems for auditoriums, gymnasiums, churches, and meeting halls.

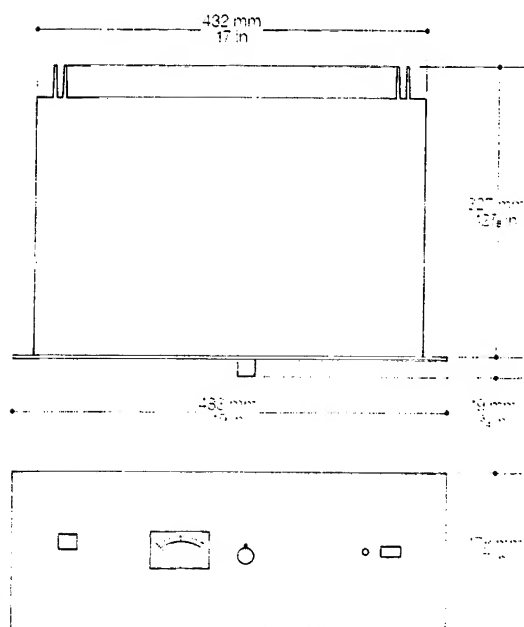
Each of the six microphone inputs accepts an unbalanced, high-impedance signal. An optional, plug-in transformer will convert an input to balanced low impedance. The line inputs are unbalanced, high impedance, and may be converted to balanced low impedance with accessory plug-in transformers. One of the microphone inputs may be internally switched to RIAA phono characteristics, and a pair of RCA-type jacks on the rear panel permits a stereo source to be fed to this input.

Each input has its own level control, and the 6502 also has a master level control and a separate level control for the headphone monitor output. Bass and treble tone controls allow equalization of the program source, and a mixer output ahead of the power amplifier permits connection of an accessory equalizer if desired. The 6502 also has a cue switch that disconnects the mixer output from the amplifier. A meter with switchable range allows visual monitoring.

The power amplifier produces 200 W from 20 Hz to 20 kHz with less than 0.2% THD. An accessory output transformer allows full-power operation into 8 or 16 Ω loads, or into a 70.7 V line.

Consumer Warranty

JBL offers a limited warranty to retail purchasers. The warranty statement is packed with the product.



Specifications

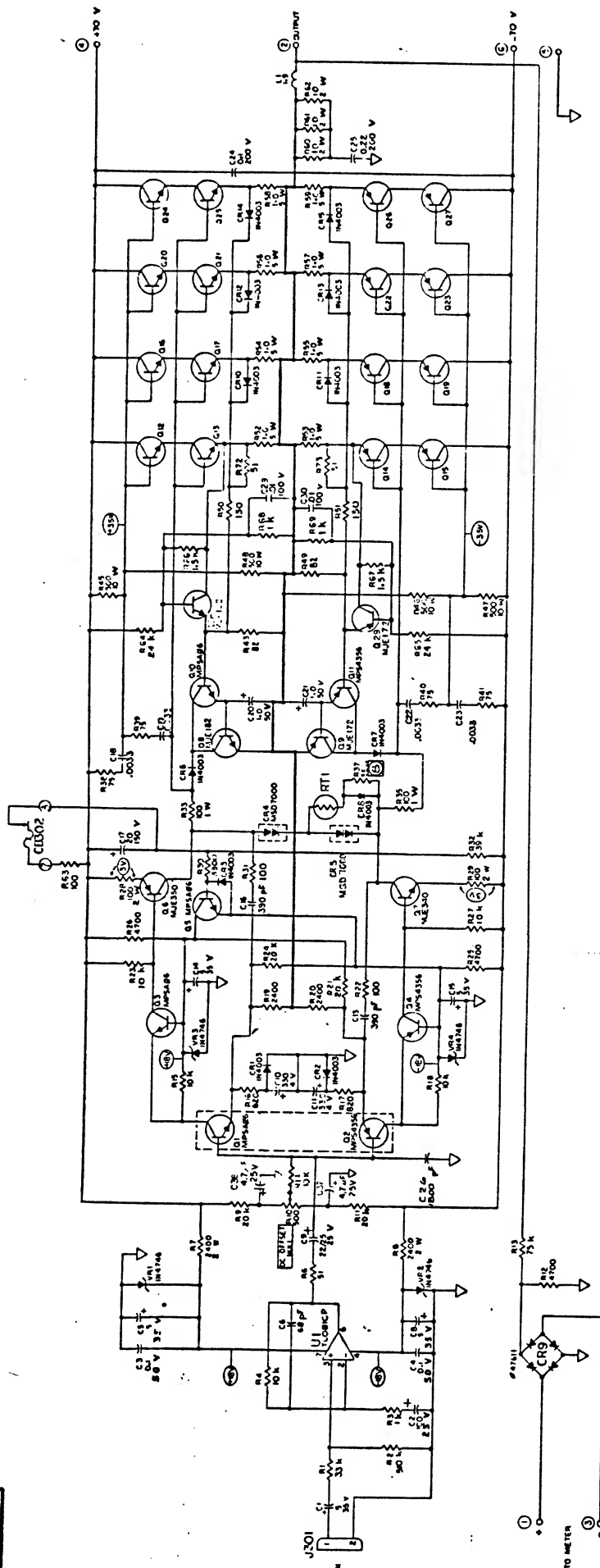
Power Output, Continuous Sine Wave		
Direct output, 4- Ω load	200 W	
Transformer output (6021 only)	200 W	
Power Bandwidth		
Direct output	200 W	
	20 Hz - 20 kHz, less than 0.2% total harmonic distortion	
150 W	10 Hz - 40 kHz, less than 0.5% total harmonic distortion	
Transformer output, 200 W (6021 only)	35 Hz - 15 kHz, less than 0.2% total harmonic distortion	
Total Harmonic Distortion, 200 W		
Direct output	Less than 0.2%, 20 Hz - 20 kHz	
Transformer output (6021 only)	Less than 0.2%, 35 Hz - 15 kHz	
Intermodulation Distortion SMPTE Standard		
200 W	Less than 0.2%	
10 W	Less than 0.1%	
0.15 W	Less than 0.1%	
Frequency Response, 1 W	20 Hz - 20 kHz, ± 0.5 dB	
Load Impedance		
Direct output	4 Ω	
Transformer output (6021 only)	8, 16, or 25 Ω	
Load Voltage, 200 W		
Direct output	28.3 V	
Transformer output (6021 only)		
8- Ω tap	40.4 V	
16- Ω tap	56.6 V	
70.7-V tap	70.7 V	
Output Regulation	Better than 15%	
Power Gain	72 dB	
Maximum Input Sensitivity		
Unbalanced high impedance (33 k Ω)	0.78 V	
Balanced 15-k Ω , with 5195 transformer	0.38 V	
Balanced 600- Ω matching, with 5195 transformer	0.38 V	
Balanced 600- Ω matching, with 5195 transformer, 14-dB step-up configuration*	0.08 V	
Signal-to-Noise Ratio	Better than 100 dB, full power	
Low Cut Filter	6 dB/octave below 250 Hz, switchable	
Front Panel Controls		
	Power switch	
	Level control	
Indicators		
	Pilot lamp	
	Level meter, dB	
Power Requirement	120/240 V AC, 50/60 Hz	
Power Consumption		
Load on direct output		
Quiescent	40 W	
1/2 power	250 W	
Full power	400 W	
Load on transformer output (6021 only)		
Quiescent	40 W	
1/2 power	275 W	
Full power	440 W	
Fuse	5-A 3AG	
Maximum Ambient Operating Temperature	60°C 140°F	
Front Panel Finish	Semi-gloss baked enamel, dark gray	
Mounting	4 EIA standard rack spaces	
Dimensions		
Front panel	483 x 178 mm	19 x 7 in
Depth of controls	19 mm	3/4 in
Depth behind panel	327 mm	12 7/8 in
Net Weight		
6021	21 kg	47 lb
6022	16 kg	35 lb
Shipping Weight		
6021	24 kg	52 lb
6022	18 kg	39 lb
Accessory	JBL Model 5195 Matching/Bridging Transformer	

JBL Professional Products are not intended for household use.

*Requires internal modification

NOTICE

THE FOLLOWING
DCR'S ARE
OUTSTANDING
AGAINST THIS
DRAWING.



REFERENCE DESIGNATIONS	LAST USED	NOT USED
RT1		
CR1		
CR2		
CR3		
CR4		
CR5		
CR6		
CR7		
CR8		
CR9		
CR10		
CR11		
CR12		
CR13		
CR14		
CR15		
CR16		
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CR95		
CR96		
CR97		
CR98		
CR99		
CR100		

Q101-Q102 MUST ALL BE SAME MANUFACTURER, Q101 SELECTED FOR STABLE IDLE
DC POWER CONSUMPTION OF 40-60W (TYPICAL).

1. Q101-Q102 MUST ALL BE SAME MANUFACTURER, Q101 SELECTED FOR STABLE IDLE
DC POWER CONSUMPTION OF 40-60W (TYPICAL).
2. Q101-Q102 MUST ALL BE SAME MANUFACTURER, Q101 SELECTED FOR STABLE IDLE
DC POWER CONSUMPTION OF 40-60W (TYPICAL).
3. Q101-Q102 MUST ALL BE SAME MANUFACTURER, Q101 SELECTED FOR STABLE IDLE
DC POWER CONSUMPTION OF 40-60W (TYPICAL).
4. Q101-Q102 MUST ALL BE SAME MANUFACTURER, Q101 SELECTED FOR STABLE IDLE
DC POWER CONSUMPTION OF 40-60W (TYPICAL).
5. Q101-Q102 MUST ALL BE SAME MANUFACTURER, Q101 SELECTED FOR STABLE IDLE
DC POWER CONSUMPTION OF 40-60W (TYPICAL).
6. Q101-Q102 MUST ALL BE SAME MANUFACTURER, Q101 SELECTED FOR STABLE IDLE
DC POWER CONSUMPTION OF 40-60W (TYPICAL).
7. Q101-Q102 MUST ALL BE SAME MANUFACTURER, Q101 SELECTED FOR STABLE IDLE
DC POWER CONSUMPTION OF 40-60W (TYPICAL).
8. Q101-Q102 MUST ALL BE SAME MANUFACTURER, Q101 SELECTED FOR STABLE IDLE
DC POWER CONSUMPTION OF 40-60W (TYPICAL).
9. Q101-Q102 MUST ALL BE SAME MANUFACTURER, Q101 SELECTED FOR STABLE IDLE
DC POWER CONSUMPTION OF 40-60W (TYPICAL).
10. Q101-Q102 MUST ALL BE SAME MANUFACTURER, Q101 SELECTED FOR STABLE IDLE
DC POWER CONSUMPTION OF 40-60W (TYPICAL).

NOTE: ALL VALUES ARE IN PERCENTS OF 100.

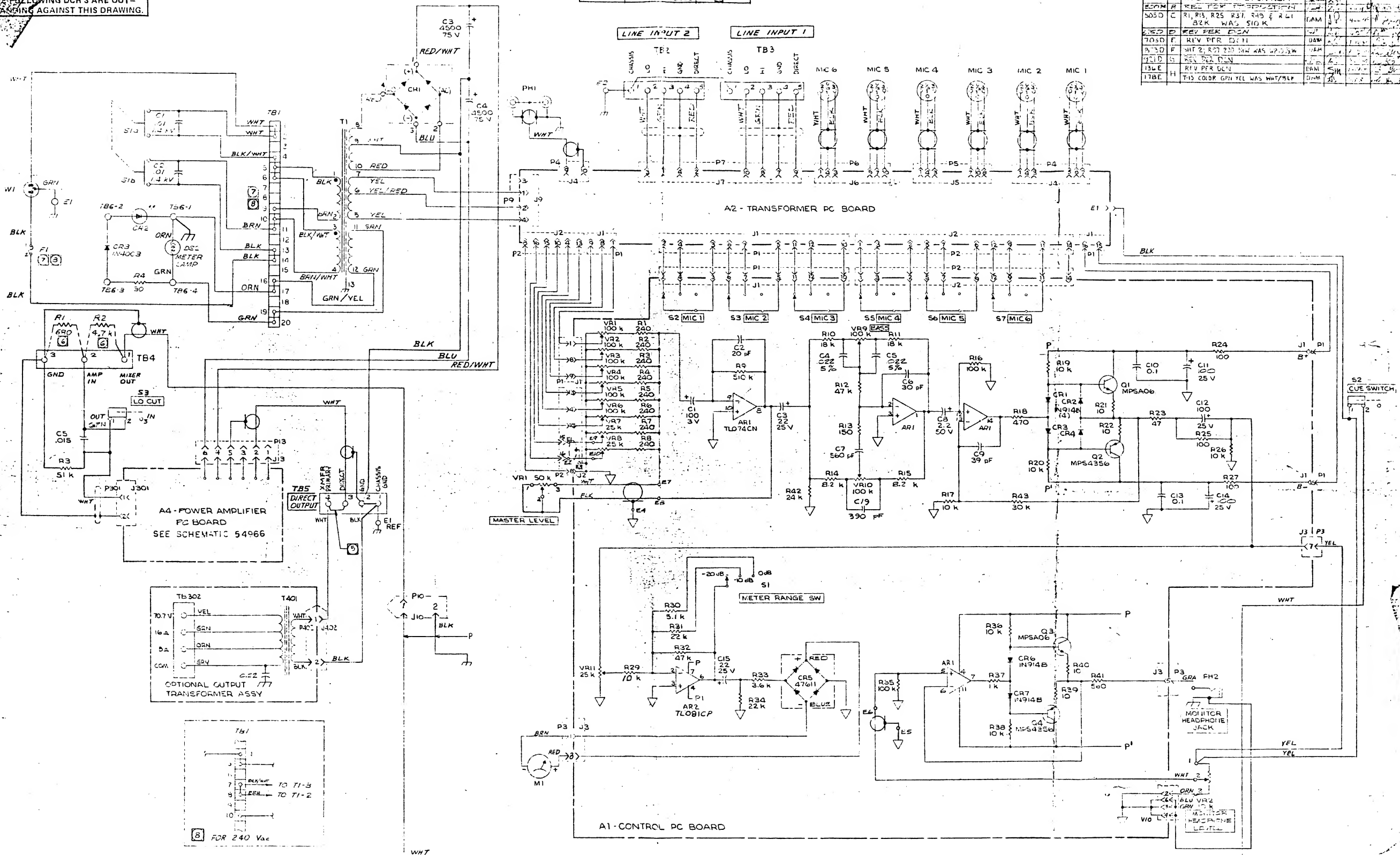
FILE COPY

1480

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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REVISIONS						
CHG	LTR	DESCRIPTION	DRFT	CHK	DATE	APPR
---	A	INFO PHOTO TYPE FURN NO. 1				
500M	B	REL FOR PHOTO TYPE FURN				
505D		R1, R13, R25 R37, R49 & R 61				
		2 BK WAS 510 K				
505D	D	REV PER DEN				
705D	F	REV PER DEN				
833D	F	SHT 2, R27 210 WAS WP 3.5W				
911D	G	REV PER DEN				
136E	H	REV PER DEN				
178E		TRX COLOR GRN YEL WAS WHT/BLU				

THE FOLLOWING DCR'S ARE OUT-
STANDING AGAINST THIS DRAWING.



AI - REFERENCE DESIGNATIONS				UNIT - REFERENCE DESIGNATIONS			
LAST USED	NOT USED	LAST USED	NOT USED	LAST USED	NOT USED	LAST USED	NOT USED
Q4				W1		C5	
AR2				F1		R4	
R43	R28			TB6		CR3	
VR11				S3		P301	PS 11, 4, 15 17 MAY 1960
CI7	CI 17, 1E			DS2	DS1	J301	PS 11, 4, 15 17 MAY 1960
CR7				T2		E2	
S7				IR2			
J3				PH2			
E10				MIC 6			
				MI			

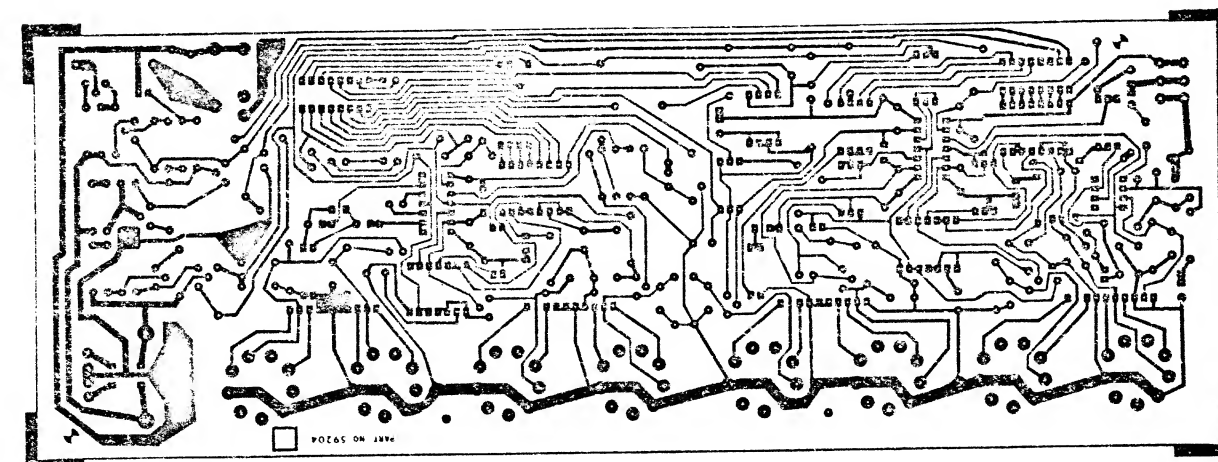
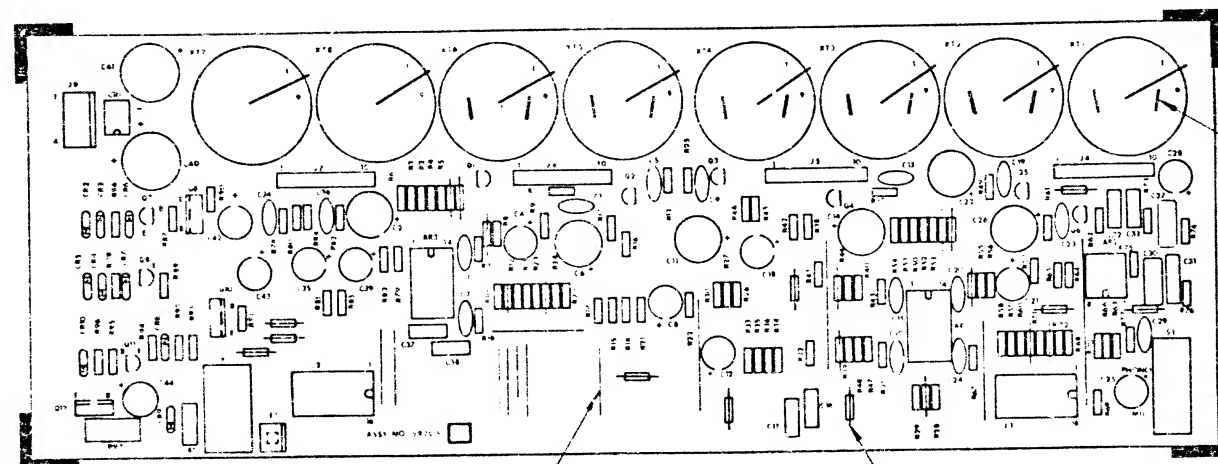
PAGE 1 of 4 6502

ITEM	PART NO.	DESCRIPTION	QTY	REMARKS
BILL OF MATERIAL				
UNITED STATES PATENT OFFICE DRAWINGS AND RE- LATED INFORMATION WITH WHICH IT IS ASSOCIATED		MATERIAL	JAMES S. BLANKING BOUNDING, INC. A National Institute of Company of the American Institute of Mechanical Engineers	
FRACTIONAL U.S.A. DIMENSIONS: 0.125 mm [1/8"]		FINISH	TITLE SCHEMATIC 6500	
ALL DIMENSIONS ARE TOLERANCES UNLESS OTHERWISE SPECIFIED		DESIGN	REV	
DO NOT SCALE DRAWINGS		DRAWN BY	H	

3. OUTPUT VARIATION FOR 240 VAC INPUT, FUSE VALUE IS 2.5 A.
4. OUTPUT VARIATION FOR 120 VAC INPUT, FUSE VALUE IS 5 A.
5. EXTERNAL COMPONENTS.
6. IN THE EVENT THE OPTIONAL OUTPUT TRANSFORMER IS EMPLOYED, A JUMPER WIRE MUST BE INSERTED BETWEEN TIES-3 AND TIES-4.
7. NON-POLARIZED CAPACITORS <1000 PF ARE MICA; ≥1000 PF ARE POLYESTER.
8. CAPACITANCE VALUES ARE IN MICROFARADS.
9. ALL RESISTORS ARE 1/4 W. 1% CARBON FILM.
10. RESISTANCE VALUES ARE IN OHMS.

NOTES: (UNLESS OTHERWISE SPECIFIED)

CHG	DATE	DESCRIPTION	DRFT	CHK	DATE	APPD
59205	5/11/79	REDRAWING DESIGN UPDATE	5/11/79	5/11/79	5/11/79	5/11/79
59205	5/11/79	REL FOR PRODUCTION	5/11/79	5/11/79	5/11/79	5/11/79



65	54727	SCREW, PNH, 4-40 x 3/16	2	(USED ON Q8 & Q10)
64	59541	HEATSINK, TRANSISTOR, TO-220	2	(USED ON Q8 & Q10)
63	48679	JUMPER, 22 AWG, SOLID, 3LK(48600)	1	508 [20] TOTAL
62	51430	JUMPER, CIRCUIT	23	
61	58325-01	JUMPER, 11 AWG, 1/4	12	
60	59277	SOCKET, 9 PIN	8	XT1-XT8
59	58722-79	POST HEADER, 10 POSITION	1	J7
58	58722-17	POST HEADER, 10 POSITION	3	J4, 5, 6
57	59021-03	SOCKET, IC, 16 PIN	2	J1, 2
56	48514	NUT, HEX	2	(USED ON Q8 & Q10)
55				
54	57065	SWITCH, SLIDE, DPDP	1	S1
53	59038	RELAY, HBI-DC, 24 V	1	K1
52	52216	IC, OP AMPL, TLO81CP	1	AR2
51	59028	IC, OP AMPL, LOW NOISE, TLO74CP	2	AR1, 3
50	58768	TERMINAL, FAST-ON, MALE, .187	1	E1
49	59290	CONNECTOR, 4 PIN, MALE	1	J9
48	55648	DUAL IN-LINE BRIDGE	1	CR1
47	59878	DIODE, ZENER IN4746A	2	CR6, 7
46	59034	DIODE, ZENER IN4731	1	CR10
45	39869	DIODE, IN4003	1	CR9
44	52544	DIODE, IN914B	5	CR2, 3, 4, 5, 8

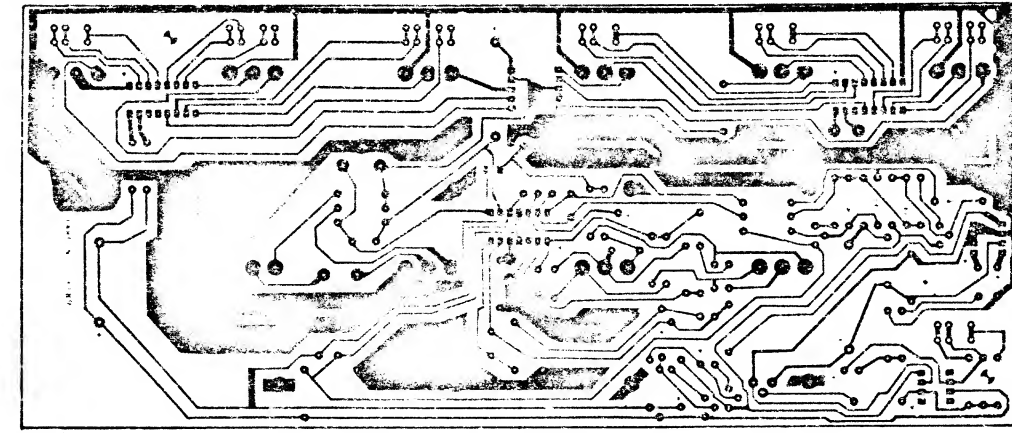
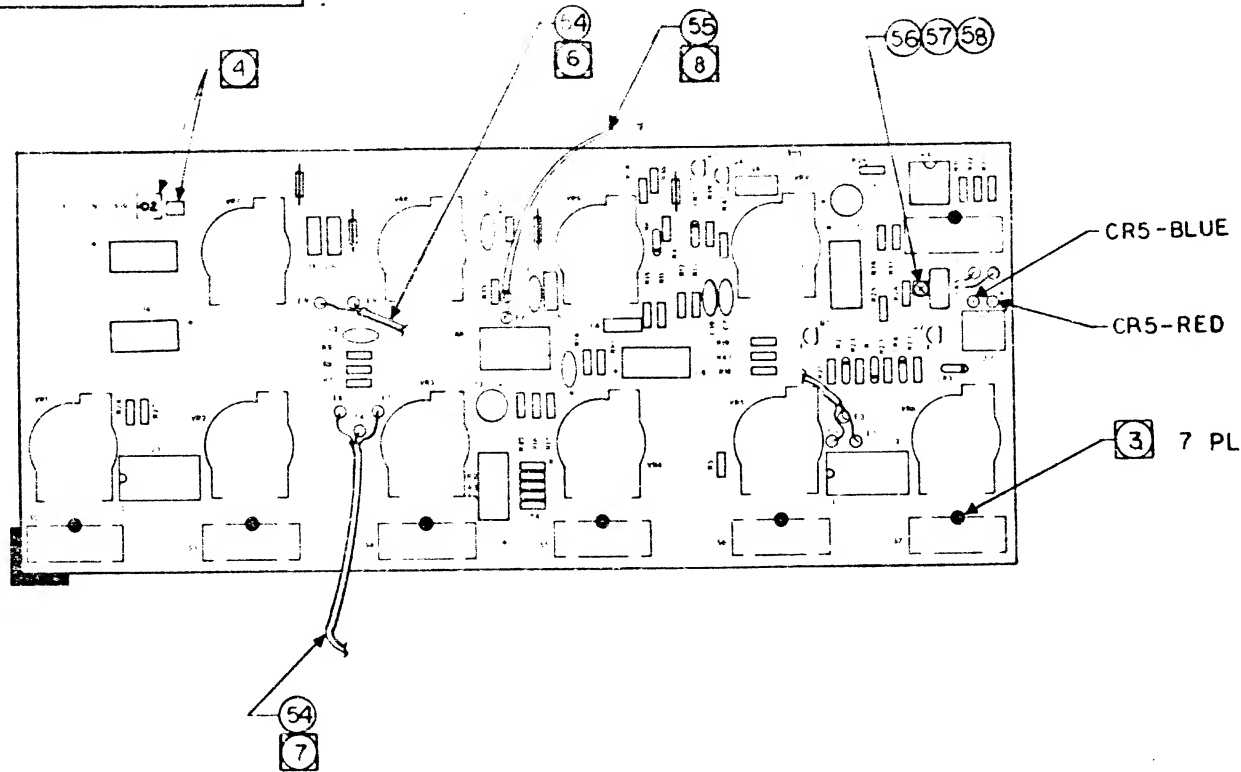
43	48337	TRANSISTOR, 2N5086	2	Q7, 11
42	58720	NPN 4A 2N6123	1	Q8
41	58719	PNP 4A 2N6126	1	Q10
40	55411	MJE 182	1	Q12
39	59030	PF5103	6	Q1, 2, 3, 4, 5, 6
38	48338	TRANSISTOR, 2N5210	1	Q9
37	58725-1005	CAPACITOR, 10 uF, 50V	1	C44
36	59268	1000 uF, 6.3 V (36178)	6	C2, 6, 11, 14, 22, 26
35	59269	220 uF, 50 V	2	C40, 41
34	59048	.0056 uF, 250 V	1	C31
33	59073	.0012 uF, 250 V	1	C30
32	58690	.1 uF, 100 V	6	C16, 17, 32, 33, 37, 38
31	58738	.01 uF, 250 V	1	C45
30				
29	48433	MICA, 20 pF, 500 V, 5%	14	C1, 3, 5, 7, 9, 10, 13, 15, 19, 20, 23, 24, 34, 36
28	48451	MICA, 100 pF, 500 V, 5%	1	C27
27	58730-2205	CAPACITOR, 22 uF, 25 V (58730)	11	C4, 8, 12, 18, 21, 25, 28, 35, 39, 42, 43
26	35720	RESISTOR, 680 ohm 1/2 W (35676)	1	R97
25	36456	910 ohm 1/4 W	6	R11, 23, 35, 47, 59, 71
24	36440	200 ohm	1	R92
23	36436	130 ohm	6	R12, 24, 36, 48, 60, 72
22	36434	110 ohm	2	R90, 91
21	36429	68 ohm	2	R87, 89
20	36522	510 k ohm	6	R1, 13, 25, 37, 49, 61
19	31055	1 M ohm	1	R94
18	36524	620 k ohm	1	R76
17	36517	330 k ohm	6	R7, 19, 31, 43, 55, 67
16	35621	100 k ohm	1	R96
15	36499	56 k ohm	1	R75
14	36497	47 k ohm	1	R73
13	36493	33 k ohm	2	R86, 88
12	36479	8.2 k ohm	6	R6, 18, 29, 41, 54, 66
11	36473	4.7 k ohm	2	R81, 85
10	36459	1.2 k ohm	1	R74
9	36464	2 k ohm	1	R95
8	36457	1 k ohm	2	R79, 83
7	36486	16 k ohm	6	R10, 22, 34, 46, 58, 69
6	36485	15 k ohm	8	R4, 16, 27, 39, 52, 64, 78, 82
5	36484	13 k ohm	6	R8, 20, 32, 44, 56, 68
4	36481	10 k ohm	20	R3, 5, 9, 15, 17, 21, 28, 30, 33, 40, 42, 45, 51, 53, 57, 63, 65, 70, 80, 84
3	36478	7.5 k ohm	6	R2, 14, 26, 38, 50, 62
2	36509	RESISTOR, 150 ohm 1/4 W	1	R93
1	59204	P.C. BOARD, TRANSFORMER	1	

ITEM	PART NO.	DESCRIPTION	QTY	REMARKS
6502				
BILL OF MATERIAL				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS WITH INCH SIZES IN BRACKETS. BREAK SHARP EDGES 0.4mm (0.015 INCH).				
TOLERANCES UNLESS OTHERWISE SPECIFIED: ANGLES: 1/2				
FRACTIONAL U.S. DIMENSIONS: 1/32				
ALL DIMENSIONS ARE FINISHED DIMENSIONS. DO NOT SCALE DRAWING.				
MATERIAL: 25 MAY 79				
JAMES B. LANSING SOUND, INC.				
TRANSFORMER P.C. BOARD ASSEMBLY				
AI 59205				

1. COMPONENTS NOT USED: C29 & R77.
2. CIRCUIT SHOWN FOR REFERENCE ONLY.
3. FOR 6502 SCHEMATIC SEE DWG. 59280-X1.
4. FOR 6502 SCHEMATIC SEE DWG. 59163-X1.
NOTES: (UNLESS OTHERWISE SPECIFIED)

THIS DRAWING AND SPECIFICATIONS ARE THE PROPERTY OF JAMES B. LANSING SOUND INC. THEY ARE ISSUED IN STRICT CONFIDENCE AND SHALL NOT BE REPRODUCED, COPIED, OR USED AS THE BASIS FOR MANUFACTURE OR SALE OF APPARATUS WITHOUT WRITTEN PERMISSION.

REVISIONS					
CHG	TR	DESCRIPTION	DRFT	CHK	DATE
ED0094	8	REDRAWN & DESIGN UPDATE. REL. FOR PRODUCTION			9/25/91



REF DESIGNATION	
LAST USED	NOT USED
Q4	
AR2	
R43	R28
VR11	
C19	C16,17,18
CR7	
S7	
J3	

46					
45					
44					
43					
42					
41					
40	59028	IC, LOW NOISE, OP AMP, TL074CN	1	AR1	
39	55201	TRANSISTOR, PNP, MPS-4356	2	Q2, Q4	
38	48340	TRANSISTOR, NPN, MPS-A06	2	Q1, Q3	
37	58370-2205	CAPACITOR, 22 μ F, 25 V (58370)	1	C3	
36	48471	560 pF, 500 V, 5%	1	C7	
35	48466	390 pF, 500 V, 5%	1	C19	
34	48440	39 pF, 500 V, 5%	1	C9	
33	48432	30 pF, 500 V, 5%	1	C6	
32	48433	20 pF, 500 V, 5%	1	C2	
31	48504	100 μ F, 25 V	1	C12	
30	56823	100 μ F, 3 V	1	C1	
29	36188	22 μ F, 25 V	3	C11, C14, C15,	
28	36180	2.2 μ F, 50 V	1	C8	
27	58690	0.1 μ F, 100 V (48417)	2	C10, C13	
26	59107	CAPACITOR, .022 μ F, 250 V, 5% (48417)	2	C4, C5	
25	36522	RESISTOR, 510 k Ω , 1/4 W, 5%	1	R9	
24	35821	100 k Ω	2	R16, R35	
23					
22	36497	47 k Ω	2	R12, R32	
21	36492	30 k Ω	1	R43	
20	36490	24 k Ω	1	R42,	
19	35605	22 k Ω	2	R31, 34	
18	36487	18 k Ω	2	R10, R11	
17	36481	10 k Ω	7	R17, 19, 20, 26, 36, 38, 29	
16	36479	8.2 k Ω	2	R14, R15	
15	36474	5.1 k Ω	1	R30	
14	36470	3.6 k Ω	1	R33	
13	36457	1 k Ω	1	R37	
12	36451	560 Ω	1	R41	
11	36449	470 Ω	1	R18	
10	36442	240 Ω	8	R1, 2, 3, 4, 5, 6, 7, 8	
9	36437	150 Ω	1	R13	
8	35549	100 Ω	3	R24, 25, 27	
7	36425	47 Ω	1	R23	
6	36410	RESISTOR, 10 Ω , 1/4 W, 5%	4	R21, 22, 39, 40	
5	59263	TRIM POT, 25 k Ω	1	VR11	
4	59179-02	POTENTIOMETER, 100 k Ω (59179-xx)	8	VR1, 2, 3, 4, 5, 6, 9, 10	
3	59179-01	POTENTIOMETER, 25 k Ω (59179-xx)	2	VR7, 8	
2	58407	SLIDE SWITCH	7	S1, S2, S3, S4, S5, S6, S7	
1	59189	PC BOARD	1		

58	48515	NUT, HEX, 2-56	1	
57	54972	WASHER, LOCK, NO 2	1	
56	55122	SCREW, PNH, 2-56 X 3/8	1	
55	58873	CABLE, SINGLE COND, COAX	X	9
54	58871	CABLE, SHIELDED, 2 COND	X	9
53	59021-01	SOCKET, IC (59021-xx)		J3
52	51430	JUMPER, CIRCUIT	4	
51	59021-03	SOCKET, IC (59021-xx)	2	J1, J2
50				
49	47611	BRIDGE RECTIFIER	1	CR5
48	52544	DIODE, 75 PIV, IN914B	6	CR1, 2, 3, 4, 6, 7
47	59876	IC, OP AMPL, JFET-INP, TL081CP	1	AR2

- 7 SOLDER ITEM 54 AS FOLLOWS:
A) SHIELD TO E4.
B) WHITE TO E7.
C) BLACK TO E8.
- 6 SOLDER ITEM 54 AS FOLLOWS:
A) WHITE FROM E1 TO E9.
B) BLACK FROM E2 TO E10.
C) SHIELD TO E3.
- 5 STRIP WIRE 6.4 [1/4] BOTH ENDS.
- 4 RUBBER STAMP ASSY DASH NUMBER & REVISION WHERE SHOWN.
- 3 ITEM 2 IS POLARIZED, DETENT MECHANISM TO BE LOCATED AS INDICATED.
2. FOR SCHEMATIC SEE 59280-XI.

- 9 LENGTH TO BE DETERMINED.
- 8 SOLDER ITEM 55 AS FOLLOWS:
A) SHIELD TO E5.
B) WHITE TO E6.

1. CIRCUITRY SHOWN FOR REFERENCE ONLY.
NOTES: (UNLESS OTHERWISE SPECIFIED.)

ITEM		PART NO.	DESCRIPTION	QTY	REMARKS
BILL OF MATERIAL					
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETRES WITH INCH SIZES IN BRACKETS. BREAK SHARP EDGES 0.4 mm. 010 inch. TOLERANCES: UNLESS OTHERWISE SPECIFIED: DECIMALS: .XXX = 0.12 .005 inch. .XXX = 0.25 .010 inch. .XX = 0.5 .020 inch. FRACTIONAL U.S. DIMENSIONS: 1/32. ALL DIMENSIONS ARE FINISHED DIMENSIONS. DO NOT SCALE DRAWING.					
MATERIAL		FINISH		MODELS USED ON	
6502		6502		6502	
JAMES B. LANSING SOUND, INC.		PC BOARD, SWITCH ASSY		DRAWING NO. A1	
REV. 1		REV. 1		REV. 1	
59190-02		59190-02		59190-02	
B		B		B	

